Preface

The Climate Monitoring and Diagnostics Laboratory (CMDL) is located in Boulder, Colorado, with Baseline Observatories in Barrow, Alaska; Mauna Loa, Hawaii; Cape Matatula, American Samoa; and South Pole, Antarctica. It is one of twelve research components within the Office of Oceanic and Atmospheric Research (OAR) of the National Oceanic and Atmospheric Administration (NOAA). CMDL conducts research related to atmospheric constituents that are capable of forcing change in the climate of the Earth through modification of the atmospheric radiative environment, for example, greenhouse gases and aerosols, and those that can cause depletion of the global ozone layer, for example, chlorine- and bromine-containing compounds.

This report is a summary of CMDL activities for calendar years 2000 and 2001. It is the 26th consecutive report issued by this organization and its Geophysical Monitoring for Climatic Change predecessor since formation in 1972. From 1972 through 1993 (numbers 1 through 22), reports were issued annually; thereafter, the reports were issued on a biennial basis. At CMDL's Internet home page (www.cmdl.noaa.gov) you will find information about our major groups and Observatories, latest events and press releases, publications, data availability, and personnel. Numerous data graphs and ftp data files are available. Information (program descriptions, accomplishments, publications, plans, data access, etc.) on CMDL parent organizations can best be obtained via the Internet (OAR: www.oar.noaa.gov; NOAA: www.noaa.gov).

This report is organized into the following major sections:

1. Observatory, Meteorology, and Data Management Operations
2. Carbon Cycle
3. Aerosols and Radiation
4. Ozone and Water Vapor
5. Halocarbons and other Atmospheric Trace Species
6. Cooperative Programs

These are followed by a list of CMDL staff publications for 2000-2001.

Inquiries and/or comments should be addressed to:

Director, R/CMDL
NOAA/Climate Monitoring and Diagnostics Laboratory
325 Broadway
Boulder, CO 80305-3328
(303) 497-6074

or

Russell.C.Schnell@noaa.gov

Judy Pereira
Years of Service: 1966-1999

John Chin
Years of Service: 1960-1962; 1964-1966; 1968-2000

Together, Judy Pereira and John Chin were a unique team that helped to make the Mauna Loa Observatory the world-class institution it is today. One cannot think of Mauna Loa Observatory without being reminded of their dedication, service, and outstanding personalities.

Judy Pereira

In 1966, Judy, the reigning "Miss Aloha Hawaii" and a student at the University of Hawaii, Hilo, joined Mauna Loa as a part-time worker. She soon became the permanent secretary and served as the heart and soul of Mauna Loa until her retirement in December 1999 after a 33-year association with the observatory. Over those years she worked for eight different directors, or rather eight directors worked with her, as she often knew much more about MLO history and daily operations than they did. She ran the observatory office in an efficient and professional manner with dashes of Hawaiian Island flavor and local culture mixed in. Because she was related to a large percentage of the people in the Hilo area, Judy could usually get repairs and services completed any time of the week, often free as a favor to a "family member." And, any member of the Mauna Loa staff was considered part of this extended family, with the requisite invitations to weddings, first-year birthday parties, Christmas celebrations, and family luaus.

Judy's ready smile, enthusiasm, empathy, friendliness, and knowledge made her memorable to all she met. She continued her role as the official greeter for Mauna Loa and Hilo throughout all her years of service. Visitors and scientists who came to Mauna Loa from around the world remained her friends for life. Often these people would come back to the Big Island decades later just to renew her acquaintance and to introduce their spouses and children to her, a living embodiment of the "Aloha" spirit.

John Chin

John joined the Mauna Loa Observatory, U.S. Weather Bureau Research Station, in 1960 to work on the Scripps Institution of Oceanography (SIO) CO_2 program. He left in 1962 to broaden his skills at NASA and Lockheed before returning to Mauna Loa in 1964 to again conduct the SIO atmospheric CO_2 monitoring program along with other observatory duties. In 1966, John left for a brief time to work at Cloud Physics, University of Hawaii, studying warm rain projects. In 1968, he rejoined Mauna Loa and Federal service. In 1974 he helped in the expansion of the NOAA carbon cycle programs at MLO. As a physicist he continued to operate both SIO and NOAA CO_2 programs, in addition to many other observatory duties, through to his retirement in December 2000, completing 37 years of service at Mauna Loa.

It has been calculated that during his tenure, John made at least 6000 round trips on the Mauna Loa Road, which is equivalent to driving around the Earth 25 times at the equator.

John is known for his reliability and predictability. He always arrived for work within 2 minutes of a set time, and his weekly lunch menu never varied. For 37 years, his lunch always consisted of a sandwich, tuna or chicken, a banana, carrot or celery sticks, and a small box of raisins that he ate exactly at 12 noon.

When John first entered service at Mauna Loa Observatory in 1960, the annual mean atmospheric CO_2 concentration was 316 ppm. The annual mean was 370 ppm in the year he retired. The MLO CO_2 curve is recognized around the world as one of the longest and most important geophysical records in existence; John can be proud that he was instrumental in helping make it so.